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June 4, 2003

Via Federal Express

Eileen L. Furey
Associate Regional Counsel
U.S. Environmental Protection Agency -
Region V
77 West Jackson Boulevard (C-14J)
Chicago, IL 60604

Re: Kalamazoo River Site - 104(e) Request for Information

Dear Ms. Furey:

Enclosed please find the response prepared on behalf of Menasha Packaging Company, LLC to U.S. EPA's 104(e) Request for Information concerning the Kalamazoo River Superfund Site. The response includes several binders of documents (in four boxes), and we have attached to the main response document a set of indices to those binders.

We hope this material, which supplements our earlier submission in this matter, is helpful. If you have any questions concerning the response or the enclosed materials, please call me at (313)-223-3674.

Very truly yours,

Sharon R. Newlon

SRN/eab

C o u n s e l l o r s A t L a w

DETROIT BLOOMFIELD HILLS LANSING GRAND RAPIDS ANN ARBOR
WASHINGTON, D.C.

MENASHA CORPORATION RESPONSE
TO U.S. EPA 3/4/03 INFORMATION REQUEST

Introduction

This response demonstrates that Menasha Packaging Company, LLC ("Menasha") is not a responsible party for contamination in the Kalamazoo River under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"). Menasha manufactures food-grade corrugating medium at its Otsego, Michigan, paper mill (for the purposes of this letter, further referred to as the "Otsego Mill"). Menasha has *never* recycled carbonless paper or other secondary stock containing PCBs and, most importantly, has *never* deinked PCB-containing carbonless paper at the Otsego Mill. Menasha does not use PCB-containing materials in its processes, and Menasha's final product fully complies with the Food and Drug Administration rules on PCB content in food-packaging material. Menasha's spent liquor, wastewater treatment sludge, and wastewater discharges to the Kalamazoo River are consistently below applicable detection levels for PCBs. Menasha has systematically removed and arranged for the proper disposal of its PCB-containing capacitors, transformers, and other equipment. Moreover, the Otsego Mill cannot possibly be the source of any contamination upstream of Menasha's facility. Therefore, Menasha is not a responsible party for contamination in the Kalamazoo River.

As is evident from the documentation forwarded to U.S. EPA in our earlier correspondence,¹ hundreds of hours of document review, production, depositions, expert work and litigation have

¹ By letter dated April 16, 2003, Menasha forwarded the following documents to U.S. EPA relating to the litigation of issues related to the Kalamazoo River. These documents are incorporated by reference herein:

1. Judge Robert Holmes Bell Opinion and Order granting Menasha's Motion for Summary Judgment (March 6, 1998), reported at 3 F. Supp.2d 799 (W.D. Mich. 1998), reversed and remanded, 228 F.3d 648 (6th Cir. 2000);
2. Stipulation and Order for Dismissal with Prejudice (January 17, 2001);
3. Plaintiff-Appellant KRSG's Brief to the Sixth Circuit Court of Appeals;
4. Defendant-Appellee Menasha's Brief to the Sixth Circuit;
5. "Opinion Regarding Menasha Corporation's Otsego Mill and the Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site" authored by John D. Schell, Jr., Ph.D., formerly a principal with ATRA Occupational & Environmental Services, Inc., and now with Blasland Back and Lee (BBL), dated April 18, 1997;
6. Dr. Schell's October 13, 1997 Addendum to his April 18, 1997 Report;
7. Dr. Schell's Affidavit; and
8. Judge Bell's Opinion in the damages trial in *KRSG v. Rockwell International Corporation*, 107 F.Supp.2d 817 (W.D. Mich. 2000), aff'd, 274 F.3d 1043 (6th Cir. 2001).

failed to demonstrate any connection between Menasha's operations and the Kalamazoo River contamination. These hours were spent not only by Menasha, but also by the KRSG, the Michigan Department of Natural Resources ("MDNR," now "MDEQ") and their employees, consultants, counsel and experts. By the time that work was completed, a federal judge had determined that Menasha was not liable, MDEQ had decided not to pursue Menasha, and the Kalamazoo River Study Group ("KRSG"), left to a few unreliable and unsubstantiated data points, which were entirely discredited by a professional now employed by their own technical expert for the site,² had settled with Menasha and dismissed their claims (under terms that Menasha is not currently at liberty to disclose). We are confident that upon review of this response, U.S. EPA will reach the same conclusion: Menasha is not a responsible party for contamination in the Kalamazoo River.

Background Information

In this response to the Information Requests, Menasha will be using several terms unique to the paper-making industry, as well as to the Otsego Mill. These terms are briefly defined below:

- **Ash Silo** - A tank or chest which holds coal ash residue remaining after coal has been burned in a boiler used to generate steam.
- **Batch Cookers** - A vessel, loaded in a batch fashion, used for pulping wood chips into paper-making fibers using heat and cooking chemicals. The batch digesters are dumped to a screw system for transport to a tank when the "cook" is complete.
- **Biosolids** - Also known as sludge. A material composed of dead bacterial bodies from the aerobic digestion of dissolved solids, as well as other suspended solids such as paper-making fibers, sand, and bark.
- **Box Converting** - The process of combining corrugating medium with linerboard using starch as a glue in order to convert the two materials into corrugated boxboard, or what is more commonly known as cardboard. Box Converting is generally performed at a box plant.
- **Box Plant Clippings** - Also known as DLK. Corrugated boxboard materials, such as corrugator or press trim, left over from Box Converting.
- **Broke** - Any paper made during the paper-making process that is either unsuitable for conversion into corrugated boxboard or unsuitable for best production efficiency. At the Otsego Mill, Broke is recycled into usable paper by being pulped, and converted into what is called Broke pulp, and then metered in small amounts back into the Furnish.

² Dr. John D. Schell, Jr., formerly a principal with ATRA Occupational & Environmental Services, Inc. authored "Opinion Regarding Menasha Corporation's Otsego Mill and the Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site" dated April 18, 1997, the addendum dated October 13, 1997, and a related affidavit all exonerating Menasha. Dr. Schell is currently with Blasland Back and Lee (BBL), the KRSG's technical consultant and expert in its work and litigation on the Kalamazoo River site.

- **Chest** - A Chest is a concrete or block vessel, sometimes tile lined, which contains process water or other materials used in the paper-making process.
- **Chips** - Wood chips made from trees or as a byproduct of a sawmill lumber operation.
- **Chipyard** - The area at the Otsego Mill where wood chips are stored on an asphalt pad for later use in the pulping process to produce virgin wood pulp.
- **Corrugating Medium** - The fluted paper between the outside sheets of linerboard in a corrugated box, which provides the box its unique stacking strength.
- **Deinking** - A process using flotation cells or dispersion and washing to remove ink particles from carbonless or ink printed papers in a recycling process of secondary fibers. This process has never been needed or used at the Otsego Mill because only brown paper corrugating medium is produced at the Otsego Mill.
- **Digester** - At the Otsego Mill, a pressure vessel which holds steam, chips, water, and a sodium carbonate cooking chemical to break down the lignin, holding paper-making fibers together in a wood chip so they can be separated and used in the production of paper.
- **Digester Squeezings Rejects** - A mixture of sand, grit, bark, leaves, and wood fines that is washed from raw wood chips prior to cooking in the Digester.
- **DLK** - Acronym for double lined kraft, a special grade of paper similar to OCC in content of fiber types (both hardwood and softwood fibers). DLK does not contain post-consumer recyclable paper or the contaminants (tape, etc.) and materials associated with the post-consumer origin of OCC. Generally, DLK is comprised of box plant clippings (leftover from the manufacture of corrugated board trimmed from the boxes) or other clean paper waste from the Box Converting operations. DLK does not require any special treatment such as cleaning or Deinking to be used for papermaking. It is generally placed into a hydropulper and agitated with hot process water until the fibers are separated from the dry DLK.
- **Evaporator** - A pressure vessel used to boil water out of the liquor washed from virgin pulp in a brown stock washer and intended for recovery of spent cooking chemical. A heat source heats the inside tubes or plates, and the spent liquor flows over the outside. The heat is transferred into the liquor causing water to boil off. The resulting liquor solids are concentrated to a state where they can be burned and the inorganic salts recovered for recycling to the Digester.
- **Fluidized Bed Reactor** - Also known as a Spent Liquor Incinerator. The Fluidized Bed Reactor is a vessel where concentrated spent liquor solids are burned for recovery of the inorganic cooking chemical for reuse within the Digester. The organic material present in

the liquor provides the BTU value to allow the liquid to burn and regenerate the cooking chemical sodium carbonate.

- **Fresh Water Wells** - Wells pumping fresh water from the surrounding aquifers into a header system in the Otsego Mill for use in the papermaking process.
- **Furnish** - Also known as stock or pulp. A papermaking term for the fibers used to make paper. For example, the Furnish for the Otsego Mill paper is recycle pulp, virgin wood pulp, and Broke.
- **Hydrapulper** - A vessel used to break down dry OCC or other recyclable papers into a liquid, pumpable form. At the Otsego Mill, heated water is added to this open-top vessel along with whole bales of OCC. The OCC and water are mixed by a large rotor on the bottom of the vessel, and the individual fibers and contaminants such as wire and tape are separated from the dry OCC. The resulting mixture is then pumped to the various stages of cleaning and screening needed to remove the unwanted materials.
- **Isopar** - A trade name class of solvents used in the Otsego Mill for many years to remove sticky or tacky deposits of wax or latex from rolls transporting or pressing the wet paper during the papermaking process.
- **Mixed Waste or Mixed Paper** - A grade of recycled paper generally defined as mixed recyclable post-consumer paper suitable for the manufacture of corrugating medium. This grade includes many different forms of recyclable paper as the name suggests and can include different percentages of OCC, computer paper, old newsprint, sackpaper, magazines, carrier carton, coated boxboard, etc. Mixed Waste was used as a small percentage of the Furnish (under 5%) for the first time at the Otsego Mill in 1993.
- **OCC** - A specific grade of recyclable post-consumer waste paper suitable for manufacture of corrugating medium and linerboard after cleaning and screening to remove materials such as tape, glue, latex binders, styrofoam, wire, and other materials unsuitable for the manufacture of paper. The primary fibers recovered in OCC are about 70% long softwood fibers and 30% short hardwood fibers.
- **Paper Machine** - The paper making equipment (including headbox, refiners, fourdrinier, press section, dryers, and winder) which form, dry and wind the paper into its final roll form before shipping.
- **Polymers** - Long chain organic molecules used in the retention of small colloidal or suspended particles from any water stream, including wastewater or papermaking systems.
- **Process Water** - Also known as White Water. The primary water used in the Pulping, Secondary Fiber recovery and papermaking processes. Process Water is generally recovered water already used in the process and contains some amount of dissolved

organic solids and suspended solids, but is suitable for use as dilution in the papermaking process.

- **Pulp** - Also known as Furnish or Stock. A slurry of Process Water and papermaking fibers.
- **Road Binder** - At one time, Menasha applied its spent liquor, which was lignin and sodium carbonate washed from the virgin Pulp after digesting, to private entities and also to counties for use as dirt road dust control and upkeep. The polymeric action of the lignin and sealing action of the sodium carbonate salts made it an excellent solution to capping and hardening dusty or crumbling dirt roads.
- **Saveall** - The IMPCO Disc Filter is a rotating disc, continuous vacuum filter. As a paper mill saveall, the disc filter receives fiber and clarifies white water for reuse. A complete description can be found in the IMPCO Manual, which is included in Attachment ____.
- **Secondary Fiber** - Generically, Secondary Fibers are paper grades which have already been used, or are not suitable for consumer use, and thus are post-consumer materials or are a byproduct of the paper converting process. Secondary Fiber is said to be “recyclable” for use in papermaking. For the Otsego Mill, this means primarily OCC-grade paper. DLK has also been used in the past. Mixed Waste grade has been used intermittently since 1993.
- **Sludge** - Also known as Biosolids. Composed of dead bacterial bodies from the aerobic digestion of dissolved solids as well as other suspended solids such as papermaking fibers, sand, and bark.
- **Softener System** - Sodium zeolite hardness exchange equipment. These units use a resin exchange medium regenerated with sodium chloride (salt) to take primarily calcium and magnesium hardness salts out of water to soften it before use as boiler feed water in the manufacture of steam in a boiler.
- **Spent Liquor** - A liquid washed from virgin Pulp to remove and recover the cooking chemical, sodium carbonate, from the liquor for reuse in the digesting process. The Spent Liquor is part of a virtual closed loop of chemical use in the digesting process. The Pulp is washed with water, and the dissolved organic and inorganic materials in the Pulp are removed as “liquor”. The liquor contains lignin, the glue that held the fibers together in the original wood chip, as well as wood sugars, such as hemicellulose, and the spent sodium carbonate cooking chemical, which helps to modulate and buffer the chemical reactions during the cooking process. Water is evaporated from the liquor, the organic lignin is burnt as a fuel, and the sodium carbonate is regenerated during the combustion as a solid. The solid cooking chemical, now called SLI product, is placed back in the Digester where it is reused to cook more wood chips into Pulp.
- **Stock** - Also known as Pulp or Furnish. A slurry of Process Water and papermaking fibers.

- **Truck Dumpers** - A large piece of equipment that physically raises the front of a semi-tractor and trailer to allow wood chips to be dumped into a reclaim unit for processing onto a storage pile in the Chipyard before digesting.
- **Vacuum Pump Seal Water** - Water used to cool and seal vacuum equipment which provides vacuum to the various pieces of equipment in the papermaking process. This water can be fresh water or recycled fresh water from within the process.
- **Valley Beaters** - An old technology for treating papermaking fibers to soften them and develop their strength potential for papermaking. This technology has been replaced with equipment known as refiners, which do the same effective treatment of the fibers more quickly and in a smaller space.
- **Virgin Pulp** - Also known as wood Pulp. A term used to describe papermaking fibers that have never been made into paper before and are newly made from digested wood chips.
- **White Water** - Also known as Process Water. The primary water used in the Pulping, Secondary Fiber recovery, and papermaking processes. It is generally recovered water already used in the process and contains some amount of dissolved organic solids and suspended solids but is suitable for use as dilution in the papermaking process.
- **Wood Pulp** - Also known as virgin Pulp. Wood Pulp is made from the sodium carbonate digesting of hardwood chips in the Digester system. Wood Pulp is part of the fiber Furnish used in the production of corrugating medium at the Otsego Mill.
- **Wood Pulping** - The process of converting hardwood chips to virgin Wood Pulp suitable for papermaking. The process involves wood chips being placed in a continuous Digester vessel with steam, water, and sodium carbonate cooking chemical to soften the lignin “glue” which holds papermaking fibers together in the wood chip. After softening, the fibers can be separated and used to make paper.

Fiber Furnish and Paper Production

1. **Identify all persons consulted in the preparation of the answers to these Information Requests.**

The following people were consulted in the preparation of the answers to these Information Requests:

Keith Kling
Environmental, Health & Safety Manager
Menasha Packaging Company, LLC
Home Office
1645 Bergstrom Road
Neenah, WI 54956-9766
920-751-2149

All of the following people are located at this address:

Menasha Packaging Company, LLC
Otsego Mill
320 North Farmer Street
Otsego, MI 49078-1125

Greg Kinser
Division Environmental Coordinator
269-692-6852

Tom Oldham
Production Manager
269-692-6858

Len Hatton
Purchasing Manager
269-692-6805

Ken Simons
Pulp Preparation Department Manager
269-692-6839

Steve Stretchberry
Environmental Engineer
269-692-6835

Gary Roys
Environmental Technician
269-692-6845

Ralph Griesshammer
Accounting Supervisor
269-692-6854

Alicia Shattuck
Senior Buyer Secondary Fiber
269-692-6818

Additionally, the following people participated in the preparation of this response:

Richard A. Glaser
Dickinson Wright PLLC
200 Ottawa Avenue, N.W., Suite 900
Grand Rapids, MI 49503
616-336-1043

Sharon R. Newlon
Dickinson Wright PLLC
500 Woodward Avenue, Suite 4000
Detroit, MI 48226
313-223-3674

Suzanne T. Croissant
Dickinson Wright PLLC
38525 Woodward Avenue, Suite 2000
Bloomfield Hills, MI 48304
248-433-7270

In addition, the 1995 State Response includes a list of persons consulted in the preparation of that response, indicating their current or former positions with Menasha at that time.

Menasha objects to U.S. EPA's request for home phone numbers and addresses because this request does not relate to the identification, nature and quantity of materials at the Otsego Mill, or to the nature or extent of a release at the Otsego Mill and, therefore, is beyond U.S. EPA's authority under CERCLA. Menasha further considers such information confidential.

2. Identify all documents consulted, examined, or referred to in the preparation of the answers to these Requests, and provide copies of all such documents.

The following documents were consulted, examined or referred to in preparation of the answers to these Requests:

- ✓ • Menasha's Response to Request for Information Pursuant to the Michigan Environmental Response Act, which Response is dated August 3, 1995 ("1995 State Response");
- ✓ • Menasha's Amendment to the 1995 State Response, which Amendment is dated May 23, 1996 ("State Response Amendment");
- ✓ • Menasha's May 1996 Submission to the Kalamazoo River Study Group ("May 1996 Submission");
- ✓ • Additional documents marked as MEN03200-MEN05088 ("Supplemental Production");
- ✓ • Additional documents marked as MEN06000-MEN06420 ("EPA Production")

Copies of those documents are attached hereto, along with general indices to those documents.

In August 1995, Menasha instituted a company-wide document retention policy. See State Response Amendment, Docs MEN03161-3178. Because Menasha had received the state's information requests prior to approval of the policy, any information which might have been considered relevant to the state's information requests was kept. During this time period, an environmental Document Retention Program was also developed, which further defined the corporate policy. Following the second court ruling in which Menasha was released from this action, implementation of the policy was undertaken. Because of the possibility of future questions about the Kalamazoo River Superfund Site, the documents submitted to MDNR as well as many other relevant documents were retained, even though the policy was to purge them. The environmental Document Retention Policy has since been revised to include health and safety issues. Some environmental files were consolidated when retention times allowed, but all environmental documents described in earlier versions are still included in the current version.

- 3. If you have reason to believe that there may be persons able to provide a more detailed or complete response to any Information Request, or who may be able to provide additional responsive documents, identify such persons.**

Copies of additional documentation concerning the Kalamazoo River site may be found in the document depository for the Kalamazoo River Study Group litigation, which Menasha understands to be located at the offices of Sonnenschein Nath & Rosenthal offices in Kansas City, Missouri. Additional documents may be located in the files of the Michigan Department of Environmental Quality.

- 4. Identify and generally describe each Menasha mill, as that term is defined in Attachment #5.**

Menasha Packaging Company, LLC, operates only one mill from which process wastewaters were discharged into the Kalamazoo River. It is known as Menasha's Otsego Mill ("the Otsego Mill"). The Otsego Mill manufactures food-grade corrugating medium. A further description of the operation of the Otsego Mill is included in the response to Request #6.

- 5. Identify all current and prior owners of each Menasha mill identified in response to Request #4. For each such owner or prior owner, further identify:**

- a) the property owned;
- b) the dates of ownership;
- c) all evidence showing that the owner controls or controlled access to any portion of the property;
- d) all evidence that a hazardous substance, pollutant, or contaminant, was released or threatened to be released at or from the owner's property during the period of its ownership; and
- e) the nature of each transaction by which ownership of the mill was transferred from one party to another (e.g. stock purchaser, merger, asset sale, etc.)

David Greene was a minority owner of the Otsego Falls Paper Mill until 1955. In 1955, Menasha Wooden Ware Company became sole owner of the Otsego Mill. In 1962, Menasha Wooden Ware Company changed its name to Menasha Corporation ("Old Menasha"). On or about March 25, 1981 (the "Transfer Date"), as part of a plan of reorganization, Menasha 1980 Corporation, a wholly-owned subsidiary of Old Menasha, acquired all the assets and liabilities of Old Menasha, including the Otsego Mill, except for certain assets located in the western United States and associated liabilities, which were unrelated to the Otsego Mill. Menasha 1980 Corporation subsequently became Menasha through a name change. All references to "Menasha" in this response which relate to events prior to the Transfer Date shall be deemed to be references to "Old Menasha."

Documentation describing the Otsego Mill property and related properties owned by Menasha is included in the May 1996 Submission, Docs MEN03132-03137. Menasha subsequently purchased additional farm land at some distance from the Mill property. Additional information concerning this property can be provided upon request.

To the extent that they have been maintained by Menasha, documents concerning the potential release of hazardous substances during Menasha's ownership and operation of the Otsego Mill are set forth in EPA Production, Docs MEN06001-06018 and described below:

- February 2, 1996: Whitewater was discharged into the municipal sewer, which was immediately reported and repaired.
- July 31, 1999: Sodium hypochlorite was released to the ground and did not impact the Kalamazoo River or any other body of water. This release was properly cleaned up.
- April 20, 2000: Whitewater was discharged to the storm drain, which was properly cleaned up.
- August 11, 2001: Whitewater was released to the Kalamazoo River through an influent line leak, which was immediately repaired.

Menasha believes there may have been one or two very small oil releases (via storm drains) to the Kalamazoo River, but those documents have been purged via document retention.

In addition, the following information was taken from the 1995 State Response:

- Test results have clearly shown that Menasha's processes have not resulted in the discharge of PCBs to the Kalamazoo River. Out of 26 samples and 116 individual PCB tests results of Menasha's effluent streams, only one result indicates that PCB concentrations exceeded the detection limit; however, the validity of that result is highly questionable. This anomalous test result from a May 13, 1975, sample from Outfall 004 is just slightly above the detection limit of 0.5 ppb, which was acceptable in 1975. Further, tests at Outfall 004 in 1974 and 1976 did not detect any PCBs. Thus, the validity of this single test result, which was very near the limit of detection and not confirmed in prior or subsequent sampling, is highly questionable.

- After all of the resources devoted by Menasha, the KRSG and MDNR, no reliable evidence was discovered to link Menasha to the Kalamazoo River impacts. The KRSG provided Menasha with two tables from unidentified reports, which indicate that in 1971 and 1985 samples from Outfall 003 contained PCB concentrations of 0.13 ppb, 0.016 ppb and 0.020 ppb. These results, however, are unsubstantiated and clearly erroneous. First, these results were all below acceptable limits of detection which were attainable by laboratories during or prior to 1985. Even as late as 1991, the National Council of the Paper Industry for Air and Stream Improvement used 0.5 ppb as the limit of detection for PCBs in wastewater streams. Second, although the KRSG materials report that these samples were obtained from the Otsego Mill, there is no record of these samples in Menasha's files. Third, the KRSG materials do not indicate who sampled the outfall, how the samples were tested, or how quality control was maintained during testing. Finally, even the KRSG's expert could not state with certainty that intake water from the Kalamazoo River was not the source of these detections.
- In 1973, Menasha disposed of a single small capacitor in Menasha's on-site landfill. A March 31, 1980, memo from Allen Schenck to Bob Gulbranson, attached as Document #32 to the 1995 State Response, describes this capacitor as containing approximately 15 gallons of PCB-containing oil in an absorbent material. At that time, PCB-containing material was not regulated under the Federal Toxic Substances Control Act and such disposal was not prohibited by any other state or federal law. Menasha is not aware of any other PCB-containing items placed in the landfill, which was closed in 1984.

The small amount of PCB-containing oil contained in the single capacitor placed in the landfill could not have possibly impacted the Kalamazoo River Superfund Site. First, the capacitor contained an absorbing medium which prevented the 15 gallons of oil from being drained. Second, even if some oil was able to drain from the capacitor, the landfill contains mostly absorbent solids such as fly ash, Secondary Fibers and Secondary Fiber waste, lime-slurry sludge, and is approximately three quarters of a mile from the Kalamazoo River. PCBs, which generally adhere to soil and other solids, could not possibly migrate that distance. Groundwater monitoring conducted by Menasha pursuant to its landfill closure plan confirms that no contaminants have migrated from the landfill and samples from Menasha's Fresh Water Wells Nos. 6 and 7, which are located in the aquifer downstream of the landfill, were non-detect for PCBs in 1980. See Document #29 to the 1995 State Response. Therefore, the landfill is not a source of PCBs in the Kalamazoo River.

- As part of Menasha's program to identify and properly dispose of PCB-containing items at the Otsego Mill, Menasha discovered and corrected four insignificant spills of PCB oil which occurred entirely within Menasha's buildings and did not affect the environment. First, in 1981, a Menasha employee discovered that less than one ounce of oil had leaked from a capacitor following a power outage. Menasha retained A-1 Disposal Corporation to clean up the spill and dispose of the capacitor off-site. See Document #30 to the 1995 State Response. Second, on February 11, 1982, a Menasha employee discovered a drain plug on a 750 KVA transformer leaking at a rate of approximately 1 drop every 5 minutes. Menasha retained Rowen & Blair to repair the leak. See Document #30 to the

1995 State Response. Third, on October 27, 1983, Menasha employees discovered a leaking 55-gallon drum of Pyranaul which had been removed from a transformer. Menasha retained Rowen & Blair to remove the drum and clean up the spill. See Document #30 to the 1995 State Response. Fourth, on May 8, 1989, a Menasha employee discovered that transformer No. H887289B had leaked oil onto the transformer's angle-iron frame, covering an area less than 3 inches by 3 inches. Menasha retained Environmental Enterprises, Inc. to clean up the spill. See Document #30 to the 1995 State Response. These four incidents involved only small amounts of oil, were cleaned up immediately, and were completely contained within Menasha's switchrooms.

The following documents attached to the 1995 State Response may describe releases or threatened releases:

- ✓ Document #33 - PCBs in waste oil
- Document #42 - Chipyard oil investigations
- Document #43 - Soil contamination on south side of mill
- Document #45 - Liquor contamination of Otsego City wells
- Document #46 - Sodium carbonate pile reclaim
- Document #53A - White Water leaks
- Document #53B - Liquor spills
- Document #53C - Stock spills
- Document #53D - Oil to 002 weir
- Document #53E - Diesel fuel leak from MDS vehicle
- Document #53F - Busperse 39 chemical spill
- Document #53G - Ash spill
- Document #53H - Lime slurry tank overflow
- Document #53I - Fuel oil under #2 machine floor

Additional documentation describing wastewater treatment issues is included in Supplemental Production, Docs MEN03964-MEN04366.

6. **Identify all current and prior operators, including lessors, of each Menasha mill identified in your response to Request #4, or any portion thereof. For each such operator, further identify:**
- a) **the property at which it conducts or conducted operations;**
 - b) **the dates of operation;**
 - c) **the nature of the operator's operations;**
 - d) **all evidence that the operator controls or controlled access to the mill property or any portion thereof; and**
 - e) **all evidence that a hazardous substance, pollutant, or contaminant was released or threatened to be released at or from the portion of the mill property at which the operator conducts or conducted operations.**

There are only three current operators of the Otsego Mill: (1) Menasha Corporation, Paperboard Division; (2) Consumers Power Company; and (3) Solar Turbines, Inc. These entities are described below:

Menasha Packaging Company, LLC. Menasha is the current owner and operator of the Otsego Mill, which consists of parcels both north and south of River Road. Menasha manufactures food-grade corrugating medium at the Otsego Mill. The Otsego Mill parcel south of River Road generally consists of: (1) two Paper Machines; (2) a Virgin Pulp Digester; (3) two Hydrapulpers used to prepare Secondary Fiber by agitating the fiber in heated Process Water; (4) co-generation plant generating steam and electricity; (5) one dual fuel (gas- or oil-fired) package boiler used as backup for the coal-fired boilers; (6) one Spent Liquor Fluidized Bed Reactor with associated Evaporator equipment; and (7) an extended aeration wastewater treatment system. The parcel north of River Road consists of: (1) a Chipyard used to store wood chips for Virgin Pulp production; (2) a system of tanks and lagoons for Spent Liquor and Biosolids storage and treatment; (3) a closed type III landfill, located approximately three quarters of a mile from the Kalamazoo River, formerly used solely for Menasha's waste; and (4) a composting facility. Menasha has conducted operations at the Otsego Mill from 1955 to the present.

Consumers Power Company ("Consumers"). Consumers has had a substation at the Otsego Mill for over 30 years; however, Menasha is not aware of the initial date of installation. Prior to 1969, the substation was located south of River Road, across from Fairview Street on an easement, approximately 40 feet square, which is still owned by Consumers. From 1969 to 1982, the substation was located at what is now Menasha's south coal pile, adjacent to the Kalamazoo River. From 1982 to the present, the substation has been located adjacent to the Kalamazoo River, directly south of the Solar Turbines co-generation plant, which is described below. Menasha has not controlled, operated or maintained these substations. These three locations are shown as Areas A, B, and C on the drawing attached as Document #1 to the 1995 State Response.

Solar Turbines Cogeneration Plant. Since 1995, Solar Turbines, Inc. ("Solar Turbines") has owned the equipment and building of a co-generation plant at the Otsego Mill, which has generated steam and electricity. Menasha owns the land and operates the plant. The location of the co-generation plant is shown as area D in Document #1 to the 1995 State Response.

Other than events described in the response to Request #5 above, Menasha does not have any information regarding hazardous substances released or threatened to be released by prior or current owners or operators of the Otsego Mill.

7. Identify each source or potential source of the release of hazardous substances, pollutants, or contaminants (e.g. polychlorinated biphenyls or "PCBs") from the Menasha mills including, without limitation:

- a) discharges of total suspended solids ("TSS") in wastewater;**

- b) erosion from waste disposal areas located at the Menasha mills or elsewhere (e.g. landfill areas) used for the disposal of wastes generated at the Menasha mills;
- c) exceedences of TSS loading limits established by the State of Michigan and/or U.S. EPA;
- d) dewatering lagoon areas located at the Menasha mills;
- e) storm sewer leaks and discharges;
- f) sewer line leaks and discharges; and
- g) machine, transformer or other equipment leaks and discharges.

To the extent that they have been maintained by Menasha, documents concerning the potential release of hazardous substances during Menasha's ownership and operation of the Otsego Mill are described in the response to Request #5.

Menasha objects to the characterization of the items listed in Request #7(a)-(g) as de facto sources or potential sources of the release of hazardous substances, pollutants or contaminants. For example, spills resulting only in indoor exposures and discharges governed by NPDES permits are exempt from the definition of "release" under CERCLA. Additionally, please see response to Request #24, confirming negative test results for PCBs in various media at the Otsego Mill. Notwithstanding that Menasha's objection, Menasha offers the following information:

a) Menasha reports the following TSS discharges:

- August 30, 1976 - suspended solids concentration of 300-900 mg/L
 - May 1977 - suspended solid permit exceedences (unknown level)
 - June 16, 1978 - 3,800 lbs/day (permit daily limit was 3,200 lbs/day)
 - June 17, 1978 - 3,247 lbs/day (permit daily limit was 3,200 lbs/day)
 - December 1979 - suspended solids permit exceedences (unknown level)
 - November 15, 2000 - 9,975 lbs/day (permit daily max limit was 7,685 lbs/day)
 - November 23, 2000 - 10,175 lbs/day (permit daily max limit was 7,685 lbs/day)
 - November 26, 2000 - 14,863 lbs/day (permit daily max limit was 7,685 lbs/day)
 - May 16, 2001 - 7,923 lbs/day (permit daily max limit was 7,685 lbs/day)
- These exceedences were due to a struggle with filamentous bacteria in the waste treatment system.

The following information regarding TSS discharges is available from Menasha's NPDES permits, as well as from monthly operating reports (MORs) from 2000 to the present.

Permit Year	Avg Daily TSS Limit	Avg TSS Discharge*
1969	3000 lb/day	
1974	3200 lb/day	
1985	5376 lb/day	
1991	4939 lb/day	

1997	4939 to 5349 lb/day	2024 lb/day
2002	6436 lb/day	4461 lb/day

* Based on comparison of daily average TSS discharges from available MORs.

A copy of the current NPDES permit, as well as the NPDES permits from 1997, 1991, 1985, and 1974 and an 1969 Order of Determination from the Water Resources Commission are included in EPA Production, Docs MEN06065-06141 and Supplemental Production, Docs MEN03649-03686 and MEN03800-03829. Monthly operating reports (MORs) from January 2000 are also included in EPA Production, Docs MEN06142-06420.

(b) The Otsego Mill included on-site landfills for the plant wastes. Any erosion from landfill areas at the Otsego Mill was contained on-site, and no erosion from waste disposal areas occurred in which contaminants could have left the site. The following areas are described:

- 002 Weir - This treatment system was designed as a flow-through system. It had a concrete lined bottom with sides raised two to three feet above the surrounding area. The area was checked daily and was immediately visible from the main parking lot.
- 004 Weir - This was initially a dug pond used for settling of spent lime. It was designed to capture runoff from the surrounding area. This was checked daily and mill traffic routinely passed the pond several times each day. In 1984, the system was modified with a tank being installed in place of the pond.
- Aeration Pond System - This system had consisted of an 8 million gallon pond, two 400,000 gallon settling ponds, a 40,000 gallon above ground clarifier, and 003 weir. One settling pond has since been replaced by a second clarifier. This area was designed and maintained to take in storm water. It was checked multiple times each day and pond level measurements were recorded daily. Any early indication of erosion was immediately repaired.
- Spent Liquor Ponds - Two ponds existed at the site. The main one was next to the building and was monitored on a 24 hour basis by the digester operator. It was bordered on the south side by a road that received immediate maintenance if any erosion was apparent. The backup spent liquor pond was located at the waste treatment area, adjacent to the aeration pond. When in use, this pond was monitored at least daily.
- Spent Lime Ponds - Two ponds were in use until the mid-1980's to settle spent lime. The overflow of these ponds went to the aeration pond and were designed to spill to the aeration pond in the event of failure of the berm. No such failure ever occurred.
- On-site Landfill and Sludge Ponds - A 78 acre parcel of property on the North side of Farmer Street was used for on-site waste disposal. Drainage from this area was directed to a catch basin at the lowest point of the property. The catch basin was constructed in 1969 as part of the aeration pond construction project. Over time, a number of sludge decanting ponds were constructed at

the site. Menasha is aware of only one pond wall failure during this time, and the contents were totally captured by the catch basin. Menasha knows of no time that the catch basin was completely full.

- c) Please see response to Request #7(a).
- d) Menasha has operated dewatering lagoons at the Otsego Mill. The lagoons were formally closed between 1983 and 1986. We have no record of any release of hazardous substances, pollutants or contaminants from the lagoons.
- e) Menasha has no record of storm sewer leaks. Except for parking lot run-off, Menasha's stormwater currently discharges pursuant to the mill's NPDES permit. Please see the response to Request #7(f), below.
- f) Menasha's process water discharges pursuant to its NPDES permit, a copy of which is included in EPA Production, Docs MEN06065-0689. and.. Please also see EPA Production, Docs MEN06090-6146, Supplemental Production, Docs MEN03649-03686 and MEN03800-03829 and Document #53A to the 1995 State Response. Menasha had the following sewer line leaks: (1) on August 11, 2001, a leak in a wastewater treatment system influent line was detected and reported; however, immediately upon detection, the influent line was shut down to stop the leak and flow to the Kalamazoo River. The leak was quickly repaired and the line was put back into service; and (2) Menasha believes that a leak occurred in either 1999 or 2000, but it was a small leak and was repaired quickly. There was no release to the Kalamazoo River, so no formal report was made. Further historic documentation concerning discharges from the Otsego Mill is included in Supplemental Production, Docs MEN03964-04366, describing exceedences of phosphorus and phenol levels.
- g) Menasha had the following machine, transformer or other equipment leaks: (1) April 24, 1997: A very small oil leak was discovered on a transformer in substation #9. The transformer leak was repaired and the oil was properly cleaned up; and (2) February 2, 1996: Whitewater was released to the municipal sewer via the Cogen drain; however this discharge was stopped and the line repaired. See EPA Production, Docs MEN06001-06007 and MEN06019-06020. In addition, please see Documents # 30, 32, 53D and 53I to the 1995 State Response, as well as response to Request #5.

8. Identify any data, analyses or other information regarding the nature and quantity of hazardous substances released from each source or potential source you identified in response to Request #7, above. To the greatest extent possible, identify any such data, estimates, analyses or other information on an annual basis from 1954 through 1989.

Please see responses to Requests #5 and #7 and Monthly Operating Reports. Additionally, please see response to Request #24, confirming negative test results for PCBs in various media at the Otsego Mill.

9. **For the period 1954 to 1989, identify for each year the types and amounts of fiber furnish used at each Menasha mill in tons. Fiber furnish may include, but is not limited to, old corrugated container (OCC); double-lined kraft (DLK); paperboard; mixed wastepaper; fine paper, bond, ledger, envelopes; old newsprint (ONP); pulp substitutes (specify type and source); purchased secondary fiber pulp (specify source); and virgin pulp (specify type).**

Prior to 1957, the Otsego Mill used only Virgin Pulp. From 1957 to 1970, the Otsego Mill used only Virgin Pulp and DLK grades of Secondary Fiber (Box Plant Clippings). In 1970-71, Menasha introduced OCC Secondary Fiber into its process, a specific grade of post-consumer paper (prior to that time, the mill was not equipped with a cleaning system capable of recycling OCC). From 1954 to 1989, Menasha did not use mixed wastepaper, fine paper, bond, ledger, envelopes, old newsprint, pulp substitutes or secondary fiber pulp.

Menasha does not maintain records of the dates and amounts of furnish it used at the Otsego Mill from 1954 to 1989. However, Menasha can provide the following general information concerning furnish use.

From 1950 to 1969, the Otsego Mill produced less than 60 tons per day (TPD) of recycled Pulp using internal Broke and Box Plant Clippings (DLK). Actual tonnages were probably 10-20 TPD. From 1969 to 1980, a 14 foot Hydrapulper and cleaning system was used. It was rated at 110 TPD at installation and was producing 150 TPD in 1980. The furnish was DLK and OCC.

Between 1980 and 1984, cleaning system improvements allowed for capacity increases to 200 TPD, with most of the Furnish being supplied by OCC. In 1985, cleaning equipment installations allowed for an initial delivery of 300 TPD, with additional upsizing of piping for future upgrades. Furnish was OCC. Improvements in 1987 and 1988 took the theoretical production capacity of recycled OCC to 400 TPD with actual production of around 320 TPD. The recycle capacity was not significantly increased again until equipment changes in 1990.

10. **For the period 1954 to 1989 and for each Menasha mill, identify the types and amounts of paper products produced annually in tons.**

Menasha does not maintain records of the amounts of paper products produced annually at the Otsego Mill from 1954 to 1989. Please see response to Request #9 for general information about paper production during that period. Additionally, the following information constitutes best estimates from Menasha's production manager for the years 1969-1991:

Based on #1PM with a finished trim of 157" and #2PM with a finished trim of 82", both producing 26# medium:

1969 to 1985

#1 PM - 900 to 1500 feet per minute, or 250 to 367 tons per day

#2 PM - 600 to 700 feet per minute, or 76 to 89 tons per day

1986 to 1991

#1 PM - 2000 to 2300 feet per minute, or 490 to 563 tons per day

#2 PM - 600 to 700 feet per minute, or 76 to 89 tons per day

11. For each paper product identified in response to Request #10, identify calculated shrinkage (*i.e.*, yield on fiber furnish) for each paper product on an annual basis. If not available, identify typical or estimated shrinkage for each paper product.

Menasha does not maintain records of calculated shrinkage from the paper products produced at the Otsego Mill from 1954 to 1989; however, past calculation records from the 1990's show 2-4% fiber loss.

12. Identify, for each Menasha mill, the annual operating days per year.

The Otsego Mill operated on an average of 340-360 days per year.

13. For the period 1954 through 1971, identify the dates (month and year) and amounts in pounds of NCR paper broke that you purchased directly or otherwise obtained from any of the sources listed in Attachment 2, or from any other NCR paper coating facility.

The Otsego Mill never purchased or otherwise obtained NCR paper broke from any sources.

14. For the period 1954 through 1971, identify the dates (month and year) and amounts in pounds of NCR paper broke and/or NCR paper converter trim that you purchased or otherwise obtained directly from or through any waste paper broker listed in Attachment 3, or from any other person. Identify, to the extent possible, the name and address of the waste paper broker or other person from whom the NCR paper broke and/or NCR paper converter trim was obtained or purchased.

The Otsego Mill never purchased or otherwise obtained NCR paper broke or NCR paper converter trim from any sources. In fact, NCR paper broke and NCR paper converter trim were actively kept out of the Otsego Mill since their fibers would have caused the mill's machines to stop working.

15. For the period 1954 through 1989, identify the dates (month and year) and amounts in pounds of post-consumer wastepaper that you purchased or otherwise obtained directly from or through any waste paper broker listed in Attachment 3, or from any other person. To the extent possible, identify the name and address of the waste paper broker or other person from whom the post-consumer waste paper was purchased or otherwise obtained.

Prior to 1957, the Otsego Mill used only Virgin Pulp. From 1957 to 1970, the Otsego Mill used only Virgin Pulp and DLK grades of Secondary Fiber (Box Plant Clippings). Neither Virgin Pulp nor DLK consists of any post-consumer waste paper.

In 1970, Menasha introduced OCC Secondary Fiber into its process, a specific grade of post-consumer paper. Menasha does not retain records of the dates and amounts of post-consumer wastepaper it purchased or otherwise obtained. However, Menasha can provide the following general information concerning OCC use.

The primary suppliers of OCC to Menasha were Borman, Spartan, Recycle America, Padnos, BFI and Smurfit. However, Menasha also purchased OCC from other smaller suppliers. Since Menasha's record retention period for purchasing records is four years, Menasha does not have any purchasing records from the relevant period of time.

- 16. To the extent possible and not otherwise identified in response to Requests #14-15 above, identify the current names, addresses and phone numbers for all waste paper brokers or other person from whom you purchased or otherwise obtained any type of secondary fiber during the period 1954 to 1989.**

Since Menasha's record retention period for purchasing records is four years, Menasha does not have any purchasing records from the relevant period of time.

Process Water Management; Wastewater Treatment; Wastewater Sludge Disposal

- 17. For the period 1954 to 1989 and for each Menasha mill, identify the dates (month and year) when save-alls were installed and/or upgraded on each paper machine at the mill.**

The IMPCO Disc Filter (9' 6" diameter) was ordered on December 22, 1965, and this unit was installed sometime in 1966. In 1974, the IMPCO Sweetener Pump from the Kraft Intermediate Chest was installed. In 1991, all 120 segments with newer stainless steel thin discs were replaced.

- 18. For each save-all identified in response to Request #17, specify the type of each save-all and the estimated efficiency of fiber recovery in per cent.**

The IMPCO Disc Filter (9' 6" diameter):

Design – 1500 gpm @ 0.5 – 0.75% average consistency
Max – 2000 gpm @ 0.5 – 0.75% average consistency

For the IMPCO Sweetener Pump, the original guarantee of the accept water was to have a clear effluent containing no more than 0.5 lb suspended soils per 1000 gallons of water. For more details, please see EPA Production, Doc MEN06000.

19. For the period 1954 to 1989 and on an annual basis, identify the volume and disposition of each of the wastewater streams generated at each Menasha mill (*e.g.*, discharged directly to a receiving water with or without treatment; discharged indirectly through a municipal sewerage system; or discharged to an off-site industrial wastewater treatment system), including but not limited to:

- Pulping and/or drinking wastewaters
- Paper machine whitewaters
- Other process and non-process wastewaters (Identify.)

(Reported volumes of the process wastewaters should be specified in either gallons per minute (gpm), gallons per day (gpd), or million gallons per day (mgd).

Menasha does not maintain records of the annual volumes of wastewater streams generated at the Otsego Mill from 1954 to 1989. During this period, the Otsego Mill discharged no wastewater to off-site industrial wastewater treatment systems, and the only wastewater that was discharged to a municipal sewerage was strictly sanitary waste.

Menasha can provide the following information concerning disposition of wastewaters and estimated volumes to the Kalamazoo River based on Michigan Waste Water Reporting Forms (reported in mgd):

Year	001 Weir		002 Weir		003 Weir	
	Daily Avg	Total	Daily Avg	Total	Daily Avg	Total
1974	0.366	128.1	0.418	146.3	0.692	242.2
1977	0.114	41.15	0.449	162.1	0.735	265.3
1978	0.071	24.42	0.401	137.9	0.636	218.8
1979	0.025	8.611	0.374	128.6	0.561	192.9
1980	0.073	26.6	0.333	121.5	0.162	205.1
1981	0.235	85.86	0.391	130.56	0.477	174.202
1982	0.459	167.653	0.405	147.739	0.557	203.392
1983	0.199	72.5	0.479	145.7	0.538	196.5
1984	0.149	54.588	0.475	173.8	0.51	186.84
1985	0.200	73.064	0.44	160.574	0.586	213.93
1986						
1987	0.293	107.105	0.474	172.864	0.444	162.076
1988	0.233	84.579	0.414	149.04	0.511	184.982
1989	0.239	87.014	0.428	156.358	0.649	236.9

Year	004 Weir		005 Weir	
	Daily Avg	Total	Daily Avg	Total
1974	0.078		4.3	98.9
1977	0.081	29.24	5.97	2155
1978	0.078	26.83	6.825	1037

1979	0.083	28.55	5.393	808.9
1980	0.076	27.7	3.786	1381.8
1981	0.071	25.9	6.1819	2256.4
1982			6.545	2388.801
1983	0.77	28.2	6.707	21448.1
1984	0.057	20.88	6.304	2307.38
1985	0.106	38.65	6.544	2387.383
1986				
1987	0.067	24.471	5.525	1939.377
1988	0.063	22.869	5.466	1924.192
1989	0.054	19.766	5.598	1953.622

20. For the period 1954 to 1989 and on an annual basis, for each of the process wastewater streams identified in response to Request #19, identify the type(s) of on-site wastewater treatment, if any, provided (*e.g.*, settling lagoons, primary treatment in clarifiers, secondary biological treatment; advanced wastewater treatment). Provide schematic diagrams of the wastewater treatment facilities and monthly wastewater treatment system operating date for bypassed flow (*i.e.*, untreated or partially treated wastewaters), treated effluent flow and untreated and treated wastewater total suspended solids (TSS) concentrations and mass discharges (*e.g.*, pounds per day).

Document #6 to the 1995 State Response is a diagram of the Otsego Mill property indicating 16 separate areas involved in wastewater or Sludge treatment or handling. These areas are described below:

Area 1 - Area 1 is the 001 weir which is used to discharge non-contact cooling water used to cool air compressors and other Otsego Mill equipment. The non-contact cooling water originates from the City of Otsego municipal water supply. Menasha installed the 001 weir in the late 1960s and has monitored the discharge pursuant to Menasha's NPDES permit conditions. The 001 weir discharges to the municipal storm sewer system, which ultimately discharges to the Kalamazoo River immediately south of the former McCleod Auto Parts store on Farmer Street.

Area 2 - Area 2 is the former location of the 002 pond and the 002 weir which was used to treat and discharge vacuum pump seal and cooling water to the Kalamazoo River. The 002 pond was used to cool and aerate the water prior to discharge. Both structures were constructed in 1969 as a pilot project for the current aeration basin discussed below as Area 7. In 1991, the flow to Area 2 was consolidated with other cooling and Process Water flows for discharge through the 003 weir, described below as Area 16, and 002 weir was permanently closed.

Area 3 - Area 3 is the former location of a Process Water treatment pond. Area 3 was at one time part of the tail race, a channel constructed in the late 1800s which diverted river water to a water wheel. Around 1946, the tail race was converted into several holding basins. A 1951 photo, available at Menasha's offices, shows details of these ponds. The Area 3 pond treated a flow of 200,000 gpd of White Water by settling suspended solids and aerating the water through a pyramidal cascade. The treated water was then discharged to the river through an unnumbered outfall. Area 3 was modified in 1969 to divert the Process Water flow to the aeration basin in Area 7, eliminate the unnumbered outfall, and convert the treatment pond to a smaller surge pond used to collect small, miscellaneous Process Water discharges. The small flow to the surge pond was pumped to the aeration pond described below as Area 7. The Area 3 pond was permanently closed in 1988.

Area 4 - Area 4 was also part of the tail race which was converted to an unlined Spent Liquor storage pond sometime before 1951. Originally, Area 4 consisted of two ponds, which were subsequently combined into one larger pond. The Area 4 pond did not have an outlet and did not discharge any liquor to the Kalamazoo River. Spent Liquor was pumped from the pond and reclaimed for use in the Otsego Mill. This pond was permanently closed in 1983 and 1984. A closure plan for the Area 3 pond is attached as Document #7 to the 1995 State Response. The closure plan states that the liquor sludge removed from the bottom of the pond was nondetect for PCBs at 0.05 mg/kg.

Area 5 - Area 5 was a steam driven turbine which generated electricity from 1951 to 1990. Non-contact cooling water for the turbine was drawn from the upstream side of the Otsego City dam and was discharged back to the river through two pipes, one above and one below the dam. Menasha's NPDES permit referred to both of these discharge points as 003-5. This discharge was eliminated in 1990 when the turbine was taken out of service.

Area 6 - Area 6 was a collection basin used for lime-containing wastewater from the boiler water Softener System and for powerhouse cooling water. Area 6 also included the 004 weir which discharged water from this collection basin to the Kalamazoo River. Suspended solids settled from the water in the basin prior to discharge through the 004 weir. Area 6 was constructed in 1951. In the mid-1970's, the lime-containing wastewater flow was routed to Area 10, discussed below. From the mid 1970s to 1991, Menasha continued to use the 004 weir to discharge powerhouse cooling water, powerhouse roof and floor drain water, and zeolite (a water softener) backwash water pursuant to Menasha's NPDES permit. In 1984, Menasha replaced the collection basin in Area 6 with an oil separation tank and permanently closed the basin. In 1987, Menasha rerouted the powerhouse floor drains from the 004 weir to the aeration pond in Area 7. In 1991, Menasha eliminated the 004 weir and consolidated its remaining flow to the 003 weir, described below as Area 16.

Area 7 - Area 7 is an 8 million gallon unlined aeration basin used to treat Process Water through aerobic digestion. The aeration basin was installed in 1969, replacing the treatment pond in Area 3. Design of the aeration basin is shown on the attached Document #8 to the 1995 State Response.

Area 8 - Area 8 is an unlined final settling pond used to polish treated wastewater from the aeration pond prior to discharge to the Kalamazoo River through the 003 weir. The settling pond is one of two ponds originally installed as part of the aeration pond installation in 1969. The second pond was replaced in 1991 by a 60-foot concrete clarifier.

Area 9 - Area 9 is a 40-foot concrete clarifier installed in 1971. This clarifier, along with the 60-foot clarifier in Area 8, removes solids from the wastewater prior to discharge to the remaining settling pond in Area 8.

Area 10 - Area 10 was a two-pond system used to pretreat lime-containing powerhouse wastewater which had been mixed with fly ash from the coal-fired boilers. The wastewater treated in Area 10 was routed to the aeration pond in Area 7 for final treatment. Menasha installed these ponds in the mid-1970's as a treatment upgrade from the former settling basin in Area 6. Menasha removed the ponds in Area 10 in 1983. Since 1983, the lime-containing wastewater has been discharged directly to the aeration basin and the fly ash has been collected in multiclones (an air pollution control device) and disposed of off-site as a dry solid.

Area 11 - Area 11 was an unlined pond for additional storage of Spent Liquor, formerly located in Area 4. This pond was used for about 10 years, beginning in 1973. This pond was permanently closed in 1983 and 1984.

Area 12 - Area 12 is used to store Spent Liquor generated from the Wood Pulping process and Sludge from the aeration basin prior to reclamation or disposal. Area 12 consists of two concrete 800,000 gallon tanks and one asphalt lined 1.2 million gallon lagoon used to store Spent Liquor, and one concrete 220,000 gallon tank and one asphalt lined 1.2 million gallon lagoon used to store wastewater treatment Sludge. Menasha constructed these tanks and lagoons in 1982 to replace the unlined liquor storage ponds in Areas 4 and 11.

Area 13 - Area 13 is the former site of 22 unlined earthen basins with a combined storage capacity of 28 million gallons. These basins were located North of River Road approximately three quarters of a mile from the Kalamazoo River. Menasha used these basins to anaerobically digest wastewater treatment Sludge from the early 1970's until final closure of the ponds in 1986. Twenty of these ponds contained only wastewater treatment Sludge and two of the ponds contained a mixture of wastewater treatment Sludge and Spent Liquor. A history of the ponds, including their closure, is attached as Document #9 to the 1995 State Response.

Area 14 - Area 14 is a containment basin located immediately south of the former unlined earthen basins in Area 13.

Area 15 - Stormwater conveyances are described in Menasha's stormwater discharge permit application, attached as Document #10 to the 1995 State Response.

Area 16 - Area 16 is the 003 weir which has been used since 1969 to discharge treated Process Water from the aeration basin in Area 7 and additionally, since 1991, to discharge treated vacuum pump seal and cooling water from the former 002 weir, described above as Area 2, and the powerhouse discharges described above as Area 6. The weir consolidation project is described in an attachment to Menasha's 1990 NPDES permit renewal application and is attached as Document #11 to the 1995 State Response.

Please also see Document #8 to the 1995 State Response, which describes the aeration pond, Document #11 to the 1995 State Response, which describes consolidation of the discharge waters, Document #53A to the 1995 State Response, which quantifies the amount of some whitewater spilled with tests for BOD and TSS, and Supplemental Production, Docs MEN04393-04395, which describe bypasses from waste treatment.

Please see the response to Request #7 for information concerning TSS discharges.

- 21. For the period 1971 to 1989 and on an annual basis, identify the amount in dry tons of wastewater treatment sludge generated at each Menasha mill and the disposition of the sludge (e.g., disposed in on-site or off-site landfills).**

Menasha can provide the following information concerning the amounts of wastewater treatment sludge generated annually at the Otsego Mill for the following years based on Michigan Waste Water Reporting Forms:

Year	Sludge
	Total
1974	23,660,000
1977	26,521,000
1978	12,269,000
1979	14,792,000
1980	15,330,000
1981	14,798,000
1982	25,433,000
1983	21,125,000

Menasha presents the following information concerning sludge application, which was taken from MDNR Waste Disposal Sheets:

1980-1986:	1057.05 OD Tons
1987:	2422.63 OD Tons
1988:	2982.69 OD Tons
1989:	2865.29 OD Tons

Properties and Sludge Applied:

#11 Mott, Alamo Township, Kalamazoo County, Section 2

1980 - 81:	221.00 OD Tons
1986:	64.47 OD Tons
1987:	246.02 OD Tons
1988:	25.96 OD Tons
1989:	403.20 OD Tons

16 Winn, Trowbridge Township, Allegan County, Section I 1

1979:	195 OD Tons
1981:	412.5 OD Tons

#31 Dugan, Otsego Township, Allegan County, Section 33

1986:	1248.67 OD Tons
1987:	277.67 OD Tons
1988:	185.02 OD Tons
1989:	411.33 OD Tons

#32 Walls, Otsego Township, Allegan County, Section 33

1983 - 84:	245.55 OD Tons
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#6 Mott, Alamo Township, Kalamazoo County, Section 2

1980 – 81	312.43 OD Tons
1987:	210.27 OD Tons
1989:	4.4 OD Tons

#7 Mott, Alamo Township, Kalamazoo County, Section I 1

1980:	337.8 OD Tons
1987:	58.5 OD Tons
1988:	138.54 OD Tons
1989	117.46 OD Tons

#8 Mott, Alamo Township, Kalamazoo County, Section I 1

1980 - 81:	149.9 OD Tons
1987:	36.45 OD Tons
1988:	70.45 OD Tons
1989:	98.6 OD Tons

#9 Mott, Alamo Township, Kalamazoo County, Section I 1

1980 - 81:	175.2 OD Tons
1987:	106.94 OD Tons
1988:	200.61 OD Tons
1989:	119.71 OD Tons

#10 Mott, Alamo Township, Kalamazoo County, Section I 1

1980 - 81:	108.3 OD Tons
1986:	7.21 OD Tons

#35 Kortokrax, Otsego Township, Allegan County, Section 15

1989:	110.00 OD Tons
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#37 Zander, Otsego Township, Allegan County, Section 26

1983:	327.36 OD Tons
1987:	242.27 OD Tons
1988:	11 1.84 OD Tons
1989:	271.7 OD Tons

#38 Zander, Otsego Township, Allegan County, Section 26

1983:	38.04 OD Tons
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#39 Zander, Otsego Township, Allegan County, Section 26

1983 - 84:	181.6 OD Tons
1988:	124.64 OD Tons
1989	116.51 OD Tons

#44 Edewaard, Gun Plains Township, Allegan County, Section 19

1983 - 86:	77.8 OD Tons
1987:	295.27 OD Tons

#45a Wallace, Otsego Township, Allegan County, Section 26

1984 - 86:	478.80 OD Tons
1987:	169.83 OD Tons
1988:	331.71 OD Tons
1989:	160.21 OD Tons

#45b Wallace, Otsego Township, Allegan County, Section 26

1989:	24.00 OD Tons
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#45c Wallace, Otsego Township, Allegan County, Section 26

1987:	37.59 OD Tons
1988:	47.16 OD Tons
1989:	29.52 OD Tons

#45d Wallace, Otsego Township, Allegan County, Section 26

1988:	35.32 OD Tons
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#45e Wallace, Otsego Township, Allegan County, Section 26

1987: 13.94 OD Tons

1988: 29.34 OD Tons

1989: 17.23 OD Tons

#55 Goble, Alamo Township, Kalamazoo County, Section 29

1986: 338.11 OD Tons

#57 Brown, Alamo Township, Kalamazoo County, Section 3

1986: 355.24 OD Tons

1987: 34.1 OD Tons

#64 Armintrout, Trowbridge Township, Allegan County, Section

1989: 51.37 OD Tons

#65 Dugan, Otsego Township, Allegan County, Section 33

1988: 149.74 OD Tons

1989: 198.2 OD Tons

#66 Armintrout, Trowbridge Township, Allegan County, Section 35

1980: 40.00 OD Tons

1988: 272.92 OD Tons

#67 Armintrout, Trowbridge Township, Allegan County, Section 36

1988: 4.89 OD Tons

#69 Boone, Alamo Township, Kalamazoo County, Section 12

1988: 284.57 OD Tons

#70 Boone, Alamo Township, Kalamazoo County, Section 12

1988: 95.8 OD Tons

#71 Boone, Alamo Township, Kalamazoo County, Section 12

1988: 428.73 OD Tons

#68 Menasha, Otsego Township, Allegan County, Section 14

1988: 148.49 OD Tons

#74 Smith, Alamo Township, Kalamazoo County, Section 2

1989: 292.75 OD Tons

18 Fisher, Allegan County, Trowbridge Township, Section 12

1980: 173.25 OD Tons

#36 Switzenberg, Otsego Township, Allegan County, Section 6

1983 -84: 27.44 OD Tons
1988: 51.68 OD Tons
1989: 167.4 OD Tons

#41 Metzger, Gun Plains Township, Allegan County, Section 19

1986: 58.00 OD Tons

#50 Armintrout, Otsego Township, Allegan County, Section 15

1984: 41.00 OD Tons

#52 Dunfield (Switzenberg), Otsego Township, Allegan County, Section 6

1984 - 85: 224.00 OD Tons
1988: 31.94 OD Tons
1989: 93.93 OD Tons

#53 Switzenberg, Otsego Township, Allegan County, Section 6

1989: 99.99

#40 Edewaard (Nieuwenhuis), Gun Plains Township, Section 19

1987: 90.98 OD Tons
1988: 37.55 OD Tons

#19 Whisler Sr., Trowbridge Township, Allegan County, Section I 1

1979: 79 OD Tons
1980: 145.0 OD Tons

#1 Thompkins, Trowbridge Township, Allegan County, Section 14

1980: 99.0 OD Tons
1981: 266.4 OD Tons
1982: 103.14 OD Tons

#33 Crowell, Trowbridge Township, Allegan County, Section 14

1979: 283 OD Tons

#12 Rowe, Alamo Township, Kalamazoo County, Section 3

1980 - 86: 388.26 OD Tons
1987: 100.04 OD Tons

#13 Rowe, Alamo Township, Kalamazoo County, Section

1980 - 81: 80.73 OD Tons
1986: 118.57 OD Tons
1987: 229.75 OD Tons
1989: 6.5 OD Tons

#14 Rowe, Alamo Township, Kalamazoo County, Section 3 1980 - 81: 39.5 OD tons 1986: 23.09 OD Tons

#63 Nieuwenhuis, Gun Plains Township, Allegan County, Section 21
1988: 173.09 OD Tons

#62 Meert, Gun Plains Township, Allegan County, Section 21
1987: 211.52 OD Tons
1989: 58.07 OD Tons

#30 Jamieson, Gun Plains Township, Allegan County, Section 17
1982 - 84: 492.0 OD Tons
1987: 161.49 OD Tons

B. Whisler Jr., 108th Street, Allegan County
1979: 84.7 OD Tons

Bruce Adams, Allegan County
1979: 20.0 OD Tons

- 22. Identify the name and location of any facility used for the disposal of wastewater treatment sludge generated at each Menasha mill.**

Please see response to Request #21.

- 23. Identify any data, analyses or other information regarding potential erosion of waste materials from any lagoon, landfill or other disposal facility identified in your response to Requests #19-22.**

Menasha is not aware of any data, analyses or other information regarding potential erosion of waste materials from its lagoons or landfill. As described the response to Request #7(b) above, the site was designed to prevent any erosion from leaving the site. Menasha is not aware of any data, analyses or other information regarding potential erosion at off-site land farming locations.

Information Regarding PCBs

- 24. For each Menasha mill, provide copies of all reports, data or other records showing PCB concentrations in the following materials:**

**Fiber furnishes used at the mill;
Paper products produced at the mill;
Untreated and treated wastewaters generated at the mill;
Wastewater treatment sludges generated at the mill;
Atmospheric emissions from the mill;
Machine, transformer or other oils used at the mill.**

At no time has Menasha purchased, recycled, deinked or otherwise used PCB containing paper at the Otsego Mill.

A Compliance Sampling Inspection report from the Michigan Department of Environmental Quality, dated September 29, 1997, , reported the following: Aroclor 1242, 1254, 1260, 1016, 1221, 1232, 1248, 1262, 1268 all reported at < 0.1 ug/l, nondetect. See EPA Production, Docs 06021-06034.

Other samples of Menasha's outfalls consistently show that PCBs are not detectable in Menasha's wastewater above acceptable detection limits. Test reports are attached as Document #25. The following five tables summarize the PCB test results of Menasha's outfalls from 1971 to 1993:

Outfall 000	Aroclor (ppb)							Total (ppb)
	1016	1221	1232	1242	1248	1254	1260	
Apr 28, 1981	<10	<10	<10	<10	<10	<10	<10	
Aug 30, 1977 Process Water				<0 001		<0 001	<0 001	
Apr 28, 1981	<10	<10	<10	<10	<10	<10	<10	
Jan 12, 1988								<0 5
Apr 14, 1988 24-hour composite	<0 05	<0 05	<0 05	<0 05	<0 05	<0 05	<0 05	
May 1, 1990 24-hour composite sampled at lagoon discharge	<0 05	<0 05	<0 05	<0 05	<0 05	<005	<0 05	

Outfall 001	Aroclor (ppb)							Total (ppb)
	1016	1221	1232	1242	1248	1254	1260	
Apr 14, 1988 24-hour composite	<0 05	<0 05	<0 05	<0 05	<0 05	<0 05	<0 05	
March 23, 1993	<4 74	<4 74	<4 74	<4 74	<4 74	<4 74	<4 74	

Outfall 002	Aroclor (ppb)							Total (ppb)
	1016	1221	1232	1242	1248	1254	1260	
May 20, 1974 Grab composite								<0 1
May 13, 1975 24-hour composite				ND		<0 01	<0 01	
Aug 9, 1976 24-hour composite				<0 0001		<0 0001	<0 0001	
Aug 30, 1977 24-hour composite				<0 001		<0 001	<0 001	
Sep 18, 1978 24-hour composite				<0 1		<0 1	<0 1	
Apr 28, 1981	<10	<10	<10	<10	<10	<10	<10	
Jan 12, 1988								<0 5

Outfall 002	Aroclor (ppb)							Total (ppb)
	1016	1221	1232	1242	1248	1254	1260	
Apr 14, 1988 24-hour composite	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	

Outfall 003	Aroclor (ppb)							Total (ppb)
	1016	1221	1232	1242	1248	1254	1260	
May 20, 1974 Grab composite Water to 003								<0.1
May 13, 1975 24-hour composite Process Water to 003				<0.01		<0.01	<0.01	
Sep 18, 1978 24-hour composite				<0.1		<0.1	<0.1	
Aug 28, 1990	ND	<3.0	ND	ND	ND	<1.0	<1.0	<3.0
March 23, 1993	<4.65	<4.65	<4.65	<4.65	<4.65	<4.65	<4.65	

Outfall 004	Aroclor (ppb)							Total (ppb)
	1016	1221	1232	1242	1248	1254	1260	
May 20, 1974 Grab composite								<0.1
May 13, 1975 24-hour composite				0.53		<0.01	<0.01	
Aug 9, 1976 24-hour composite				<0.0001		<0.0001	<0.0001	
Apr 28, 1991	<10	<10	<10	<10	<10	<10	<10	
Apr 14, 1988 24-hour composite	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	

River Intake	Aroclor (ppb)							Total (ppb)
	1016	1221	1232	1242	1248	1254	1260	
May 20, 1974 River intake grab sample composite								<0.1

These tables clearly show that Menasha's processes have not resulted in the discharge of PCBs to the Kalamazoo River. Out of 26 samples and 116 individual PCB tests results of Menasha's effluent streams, only one result indicates that PCB concentrations exceeded the detection limit; however, the validity of that result is highly questionable. This anomalous test result from a May 13, 1975, sample from Outfall 004 is just slightly above the detection limit of 0.5 ppb, which was acceptable in 1975. Further, tests at Outfall 004 in 1974 and 1976 did not detect any PCBs. Thus, the validity of this single test result, which was very near the limit of detection and not confirmed in prior or subsequent sampling, is highly questionable.

After all of the resources devoted by Menasha, the KRSG and MDNR, no reliable evidence was discovered to link Menasha to the Kalamazoo River impacts. In addition to the test results summarized in the above tables, the Kalamazoo River Study Group has provided Menasha with

two tables from unidentified reports which indicate that in 1971 and 1985 samples from Outfall 003 contained PCB concentrations of 0.13 ppb, 0.016 ppb and 0.020 ppb. These results, however, are unsubstantiated and clearly erroneous. First, these results were all below acceptable limits of detection which were attainable by laboratories during or prior to 1985. Even as late as 1991, the National Council of the Paper Industry for Air and Stream Improvement used 0.5 ppb as the limit of detection for PCBs in wastewater streams. Second, although the Kalamazoo River Study Group materials report that these samples were obtained from the Otsego Mill, there is no record of these samples in Menasha's files. Third, the Kalamazoo River Study Group materials do not indicate who sampled the outfall, how the samples were tested, or how quality control was maintained during testing. Finally, even Kalamazoo River Study Group's expert could not state with certainty that intake water from the Kalamazoo River was not the source of these detections.³

Because Menasha produces products used to package food for human consumption, Menasha does not use PCBs or PCB-containing material in its processes and, as a result, does not produce PCB-containing waste. Menasha has never detected PCBs in the raw materials used to manufacture paper at the Otsego Mill and, in fact, has received letters from several manufacturers of commercial products used at the Otsego Mill, including Hercon UBK (used to increase the water shedding properties of paper); Calgon, Enerco, and Betz wastewater Polymers (used to remove suspended solids from Process Water prior to discharge to the Kalamazoo River); Calgon and Haviland steam treatment chemicals (used to reduce scale buildup in steam pipes); Cosmoline (a rust inhibitor); Dubois and Big Tex cleaning solvents; Vertan coolant; and Zep weed killer, stating that these products do not contain PCBs. These letters are attached as Document #27 to the 1995 State Response. In 1980, samples of Menasha's sodium carbonate, which is used in the Pulp cooking process, were non-detect for PCBs at 0.1 ppm. See Document #28 to the 1995 State Response. Also in 1980, samples from two of Menasha's Fresh Water Wells were non-detect for PCBs at 0.1 ppb. See Document #29 to the 1995 State Response. Menasha has never recycled carbonless paper or used PCB-containing materials in its Secondary Fiber Stock. Because Menasha does not use PCBs in its paper-making process, its final product consistently complies with the PCB limits established by the Federal Food and Drug Administration for food packaging material.

Further, there is no reliable information linking PCBs to Menasha's process waste streams. A total of 195 individual PCB tests results have been obtained for Menasha's process waste stream from 1971 to 1993 (120 test results on wastewater discharges from 1971 to 1993; 40 test results on wastewater treatment Sludge in 1988, 1992, and 1993; 8 test results on Spent Liquor in 1983 and 1993; 20 test results on fly ash in 1982 and 5 test results on ash-lime wastewater Sludge in 1982). Miscellaneous PCB tests have been run on Menasha's Fresh Water Wells, various process chemicals, wastewater Sludges, boiler ash, Spent Liquor, soil, and Secondary Fiber rejects. All of these results were below the applicable detection limit for PCBs. These test results are attached as Document #25 to the 1995 State Response. The following table summarizes the PCB test results of these various process-related areas from 1980 to 1993.

³ This data was entirely discredited by a Dr. Schell, a consultant currently employed by KRSG's own technical expert for the site.

Misc. PCB Tests	Aroclor (ppb)							Total (ppb)
	1016	1221	1232	1242	1248	1254	1260	
Jan 17, 1980 Menasha Groundwater wells 6-7				<0 1				
Jan 17, 1980 Menasha groundwater well on 106th Street				<0 2				
Nov 14, 1980 Sodium carbonate				<100			<100	
Mar 14, 1982 Ash-lime Sludge				<0 2	<0 2	<0 2	<0 2	<0 2
Mar 14, 1982 Fly ash composite				<0 2	<0 2	<0 2	<0 2	<0 2
Mar 14, 1982 Fly ash from single supplier (sample 2382)				<0 2	<0 2	<0 2	<0 2	<0 2
Mar 14, 1982 Fly ash from single supplier (sample 2182)				<0 2	<0 2	<0 2	<0 2	<0 2
Mar 14, 1982 Fly ash from single supplier (sample B082)				<0 2	<0 2	<0 2	<0 2	<0 2
Mar 24, 1983 Liquor pond Sludge composite sample								<50
June 13, 1986 Soil Sample								<100
June 13, 1986 Isopar								<100
June 13, 1986 Soil Sample								<100
June 13, 1986 Soil at barrel storage area								<100
Jan 12, 1988 Sludge								<200
Feb 12-26, 1992 Composite Secondary Fiber Rejects (Sample 920495-05)								<500
May 5, 1992 Sludge	<1 9	<9 3	<1 9	<1 9	<1 9	<2 6	<2 6	<0 5
June 29, 1992 Wastewater treatment Sludge	<1 9	<9 2	<1 9	<1 9	<1 9	<2 6	<2 6	
July 20, 1992 Secondary Fiber Report		<0 5	<0 1	<0 1	<0 1	<0 1	<0 1	<1
March 23, 1993 Sludge	<10 95	<10 95	<10 95	<10 95	<10 95	<10 95	<10 95	
March 23, 1993 Spent Liquor	<45 99	<45 99	<45 99	<45 99	<45 99	<45 99	<45 99	
April 6, 1993 Sludge	<19	<51	<19	<19	<10	<4 6	<19	
April 13, 1993 Sludge	<1 3	<9 4	<1 3	<100	<1 3	<8 8	<8 0	
April 20, 1993 Sludge	<2 2	<1 9	<2 2	<100	<2 2	<4 3	<15	

These test results show that materials at the Otsego Mill, including fresh water supply, Digester cooking chemicals, Spent Liquor, Secondary Fiber rejects, boiler ash, waste treatment Sludges, soil at chemical storage areas, and soil beneath the liquor storage ponds all were non-detect for PCB's. The results clearly show that Menasha's processes have not resulted in the discharge of PCBs to the Kalamazoo River.

- 25. Provide copies of all reports, data or other records in your possession, whether generated by Menasha or its consultants, generated by paper industry trade associations and/or research organizations, or generated by government agencies and organizations, showing PCB concentrations in the following materials: secondary fibers used as furnishes to secondary fiber pulp and paper mills; pulp substitutes; virgin pulps; any paper mill products (e.g., paper, paperboard, tissue); process wastewaters, wastewater treatment sludges; atmospheric emissions, or other materials associated with the pulp and paper industry.**

To the extent that Menasha has maintained records of PCB testing of its own products and wastestreams, they are provided herein. Menasha has not retained records of such information from other sources within the pulp and paper industry.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted.

Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

By: Tim L. Howard
Name: Tim L. Howard
Title: General Manager